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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,795	01/16/2004	Han Ncc	7272-51	8280

7590 07/03/2007  
Woodard, Emhardt, Moriarty, McNett & Henry LLP  
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Suite 3700  
111 Monument Circle  
Indianapolis, IN 46204-5137

EXAMINER
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WONG, EDNA

ART UNIT	PAPER NUMBER
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1753

MAIL DATE	DELIVERY MODE
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07/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/759,795

Applicant(s)

NEE, HAN

Examiner

Edna Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 9, 11 and 12 is/are rejected.  
7) ☒ Claim(s) 10 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

This is in response to the Amendments dated June 14, 2007. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

***Response to Amendment***

**Specification**

The disclosure has been objected to because of minor informalities.

The objection of the disclosure has been withdrawn in view of Applicants' amendment.

**Claim Rejections - 35 USC § 102**

Claims **9 and 11** have been rejected under 35 U.S.C. 102(b) as being anticipated by **EP 733,931** ('931).

The rejection of claims 9 and 11 under 35 U.S.C. 102(b) as being anticipated by EP 733,931 ('931) is as applied in the Office Action dated March 14, 2007 and incorporated herein. The rejection has been maintained for the following reasons:

Applicant states that EP '931 neither discusses a photovoltaic device, any combination of elements that might be expected to function in a photovoltaic device, nor the ability of any of the combination of elements presented being capable of converting light into an electromotive force.

In response, the device claims cover what the device is, not what the device does. A device claim may be anticipated even if it operates in a different way as the prior art, as long as there are structural differences.

The examiner sees no structural differences between the device disclosed by EP '931 and the device that is presently claimed.

Applicants state that EP '931 is silent as to whether the single oxide layer would function as a doped semiconductor structure to accomplish the conversion of light into an electromotive force and nothing more than the assertion is provided in the Office Action.

In response, claim 9, line 3, recites "a doped semiconductor structure". There is no specificity recited or required for the doping material or the semiconductor material. Thus, any kind of doping material and any kind of semiconductor material would read on these, including the transparent oxide layers disclosed by EP '931 (page 4, lines 5-15).

The manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus if the prior art apparatus teaches all of the structural limitations of the claim. *Ex parte Masham* 2 USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987) and MPEP § 2114.

Applicant states that the Office Action provides no argument that such a conversion would be inherent in the structure described.

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In response, the device claims cover what the device is, not what the device does. A device claim may be anticipated even if it operates in a different way as the prior art, as long as there are structural differences.

The examiner sees no structural differences between the device disclosed by EP '931 and the device that is presently claimed.

Applicants state that in view of the teaching at page 4, lines 48-50 that levels of magnesium lower than 0.1 atomic percent do not prevent silver migration, this difference is significant.

In response, an amount of 0.1 atomic percent Mg is disclosed by EP '931. The reference discloses what is claimed.

Claim Rejections - 35 USC § 103

I. Claim 10 has been rejected under 35 U.S.C. 103(a) as being unpatentable over **EP 733,931** ('931) as applied to claims 9 and 11 above.

The rejection of claim 10 under 35 U.S.C. 103(a) as being unpatentable over EP 733,931 ('931) as applied to claims 9 and 11 above has been withdrawn in view of Applicant's remarks.

II. Claim 12 has been rejected under 35 U.S.C. 103(a) as being unpatentable over **EP 733,931** ('931) as applied to claims 9 and 11 above, and further in view of **Ukita et al.** (US Patent No. 5,940,154).

The rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over EP 733,931 ('931) as applied to claims 9 and 11 above, and further in view of Ukita et al. is as applied in the Office Action dated March 14, 2007 and incorporated herein. The rejection has been maintained for the following reasons:

Applicant states that the Office Action has not provided any understanding for how Ukita's teaching of how to improve the image quality produced by a liquid crystal device suggests to one skilled in the art that the incorporation of a roughened surface into a photovoltaic cell might enhance the desired conversion.

In response, the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. *In re Linter* 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 US 904 (1991); and MPEP § 2144.

### ***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter:

Claim 10 defines over the prior art of record because the prior art does not teach or suggest the photo-voltaic device of claim 9, wherein  $0.0005 < p < 0.05$ .

The prior art does not contain any language that teaches or suggests the

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above. EP '931 teaches that if the amount is less than 0.1 atomic percent, the effect of preventing the silver migration tends to be insufficient (page 4, lines 49-50). Therefore, a person skilled in the art would not have been motivated to adopt the above conditions, and a prima facie case of obviousness cannot be established.

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from

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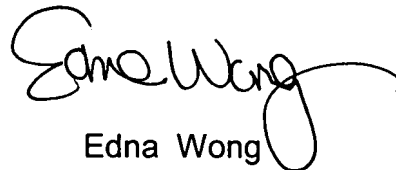
the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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A handwritten signature in black ink, appearing to read "Edna Wong". The signature is fluid and cursive, with the first name "Edna" and last name "Wong" clearly distinguishable.

Edna Wong  
Primary Examiner  
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EW  
July 1, 2007